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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/084,486 | 02/28/2002 | Kyong-il Yun | Q68113 | 7457 |
| 23373 7590 06/01/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | EXAMINER WENDMAGEGN, GIRUMSEW | |
| | | | ART UNIT 2621 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--|--------------------------------------|--|
| Office Action Summary | Application No. 10/084,486 | Applicant(s) YUN, KYONG-IL | |
| | Examiner Girumsew Wendmagegn | Art Unit 2621 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-15 is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>2/9/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim1-6 rejected under 35 U.S.C. 103(a) as being unpatentable over Nakagaki et al. (Patent Number US 5,852,474), Yamagishi et al (Patent Number US 6,141,491) and Okubo (patent number US 5,337,296).

Regarding claim1, Nakagaki et al (hereinafter Nakagaki) teaches an apparatus for searching for broadcast signals in a television (TV) comprising: a storage medium for storing a broadcast signal, which is received from the TV, in units of a predetermined sequential and cyclical time period (see figure3A and column4 line 65-column5 line1-7) but does not teach a skip control unit for skip-sampling the broadcast signal stored in the storage medium, based on a set multiple-times speed; and a direct move (DM) control unit for searching the broadcast signal stored in the storage medium for the location of a frame corresponding to a set time point. However Yamagishi et al teaches a skip control unit for skip-sampling the broadcast signal stored in the storage medium, based on a set multiple-times speed(see figure9 element 90 read controller) and Okudo teaches and a direct move (DM) control unit for searching the broadcast signal stored in

Art Unit: 2621

the storage medium for the location of a frame corresponding to a set time point(see figure3 element9 search control device).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate skip control of Yamagishi and direct move control of Okudo in to Park in to Nakagaki system because it would make searching the recorded information much effective.

Regarding claim2, see the teaching of Nakagaki above. Nakagaki does not teach the storage medium is being Hard Disc Drive (HDD). However, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to change a disk like recording medium of Nakagaki with Hard Disc Drive.

One of ordinary skill in the art at the time the invention was made would have been motivated to replace disk like medium of Nakagaki with Hard Disc Drive because Hard Disc Drive has more capacity to record broadcast signal.

Regarding claim3, Nakagaki teaches the apparatus of claim 1, wherein the storage medium stores the broadcast signal in real time (column3lines 35-42).

Regarding claim4, Yamagishi does not teach a slow control unit for reproducing one frame N times repeatedly if a slow multiple-times speed is set to $1/N$ (N is an integer)(see column17 lines 26-35). However it is old and well known in the art to

Art Unit: 2621

reproduce one-frame N time repeatedly if a slow multiple-times speed is $1/N$. Therefore official Notice is taken.

One of ordinary skill in the art at the time the invention was made would have been motivated to reproduce one frame N time in order to allow the user visually to search the desired record part.

Regarding claim5, Yamagishi teaches the apparatus of claim 1, wherein the skip control unit samples frames by skipping frames based on a set multiple-times speed, starting from an I frame (see figure9 I frame detector and column17 48-51).

Regarding claim6, Okubo teaches the apparatus of claim 1, wherein the DM control unit searches for a frame, by calculating the address pointer location value of a previous I frame, which corresponds to a set time, based on a current I frame (column9 line52-column10 lines 6).

Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, absent unexpected results to the contrary.

Allowable Subject Matter

Claim7-15 is allowable over the prior arts.

The following is an examiner's statement of reasons for allowance: The present invention is directed to an apparatus for searching a broadcast signal forward and backward using a storage medium. Each independent claims identify uniquely distinct features " Backward search: (c) calculating a distance value $(P_{temp} = (T_{set} * S_r) / (I_d - 1))$ from a current address pointer value (P_{now}) corresponding to the time set in step (b); (d) calculating a difference (P_d) between the current address pointer value (P_{now}) and the distance value (P_{temp}) calculated in step (c); (e) comparing the value (P_d) with a minimum value (P_{min}) of the address pointers of the storage medium; and (f) determining the value (P_d) as the address pointer value of a location which is searched for if the comparison result of step (e) indicates that the value (P_d) is equal to or greater than the minimum value (P_{min}) , and otherwise, determining a value, which is obtained by subtracting the minimum value (P_{min}) from the value (P_d) and adding the subtraction result to the maximum value (P_{max}) of address pointers of the storage medium plus 1, as the address pointer value of the location which is searched for" and "forward search: (d) calculating a sum (P_d) of the current address pointer value (P_{now}) and the distance value (P_{temp}) calculated in step (a); (e) comparing the value (P_d) with a maximum value (P_{max}) of the address pointers of the storage medium; and (f) determining the value (P_d) as the address pointer value of a location which is searched for if the comparison result of step (e) indicates that the value (P_d) is not greater than the maximum value (P_{max}) , and otherwise, determining a value, which is obtained by subtracting the maximum value (P_{max}) of address pointers of the storage medium plus 1 from the value (P_d) , as the address pointer value of the location

which is searched for". The closest prior art, Nakagaki et al (Patent Number US 5,852,474), Okudo (US 5,337,296) and Yamagishi et al. (US 6,141,491) either individually or in combination, fail to anticipate or render the above underlined limitations obvious.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Girumsew Wendmagegn whose telephone number is 571-270-1118. The examiner can normally be reached on 7:30-5:00, M-F, alternate Friday off.

Art Unit: 2621

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai can be reached on (571) 272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


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